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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,642	02/27/2004	Yefim Sukhman	483018016US1	7240

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EXAMINER

FLORES RUIZ, DELMA R

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/788,642

Applicant(s)

SUKHMAN ET AL.

Examiner

Delma R. Flores Ruiz

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## ETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

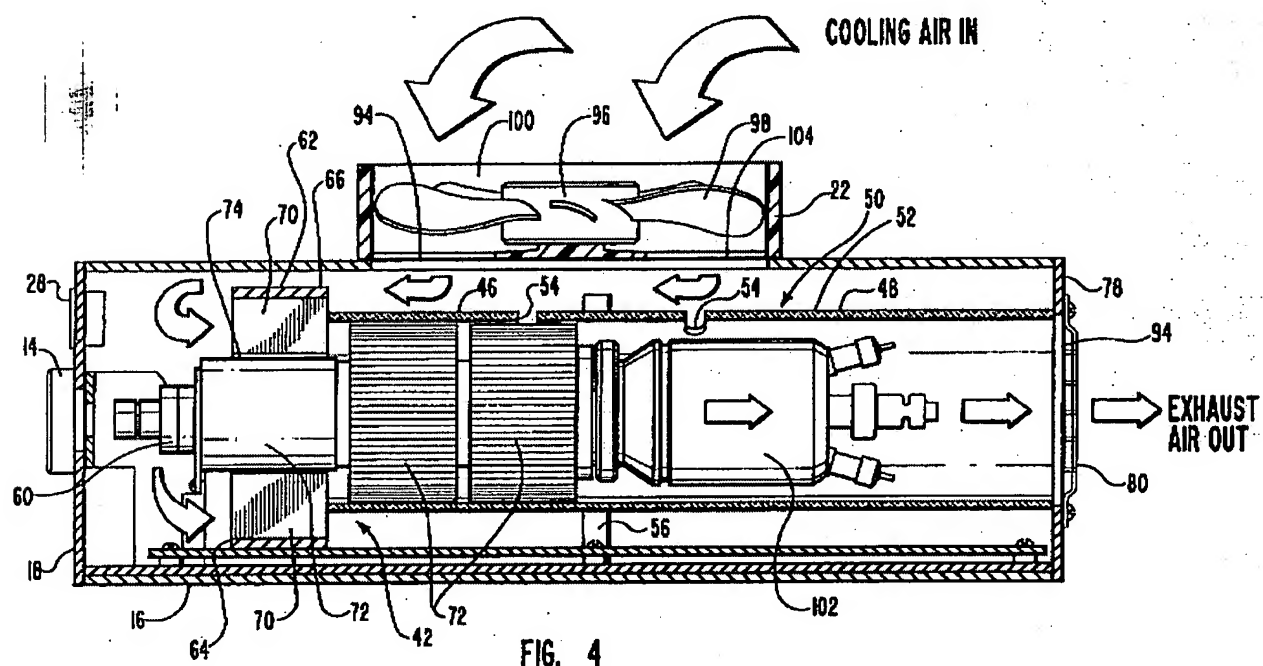
Claims 1 – 3, 5 – 10, 12 – 18 and 20 – 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Ostler (5,550,853).

***Regarding claim 1***, Ostler discloses in Figure 4, a laser, which comprises: a laser source (see Fig. 4, Character 42) containing: a laser resonator (Column 5, Lines 48 – 49); a laser media see Fig. 4, Character 50, reference call plasma tube); and a means of exciting the laser media (see Fig. 4, Characters 46, 48, 60 and 102, reference call cathode and anode); a power source (Column 4, Lines 54 – 56) for causing the laser source to generate a laser beam (see Fig. 4); and a fan (see Fig. 4, Character 100) for generating an air flow; wherein the laser source and the power source each have an exterior surface; and wherein the laser source and the power source are arranged in an end-to-end series relation along a longitudinal axis such that

Art Unit: 2828

the fan directs the air flow generally in the direction of the longitudinal axis to pass first substantially adjacent to the exterior surface of the laser source for the cooling thereof, and then to pass substantially adjacent to the exterior surface of the power source for subsequent cooling thereof (Figure 4, Column 1, Lines 44 – 67, Column 2, Lines 1 – 3, Column 4, Lines 60 – 67 and Column 5, Lines 1 - 5).

Ostler shown Figure 4



**Regarding claim 2,** Ostler discloses in Figure 4, the exterior surfaces (see Fig. 4, Characters 16, 18) of said laser source (see Fig. 4 Character 42) and said power source (Column 4, Lines 54 – 56) includes: a substantially developed surface to facilitate transfer of heat to air; wherein the fan (see Fig. 4, Character 100) directs

Art Unit: 2828

the air flow substantially adjacent to the developed surface of each of said laser source and said power source (see Fig. 4).

**Regarding claims 3, 11 and 19,** Ostler discloses in Figure 4, a cooling fins (see Fig. 4 Character 70).

**Regarding claims 5, 13, and 21,** Ostler discloses in Figure 4, laser source (see Fig. 4, Character 42) and said power source (Column 4, Lines 54 – 56) have generally equal cross-sectional areas in a direction perpendicular to the longitudinal axis (See Fig. 4).

**Regarding claims 6, 14, and 22,** Ostler discloses in Figure 1 and 4 a shroud (see Fig. 1, Character 20, see Fig. 4, Characters 16 and 18) for covering said laser source and said power source, with said shroud including: interior walls forming a single air channel for directing the air flow along the longitudinal axis to pass substantially adjacent to the exterior surfaces of said laser source and said power source (Figure 4, Column 6, Lines 60 – 67 and Column 7, Lines 1 – 5).

**Regarding claim 7,** Ostler discloses in Figure 4 a laser which comprises: a laser source (see Fig. 4, Character 42) containing: a laser resonator (Column 5, Lines 48 –

49); a laser media see Fig. 4, Character 50, reference call plasma tube); and a means of exciting the laser media (see Fig. 4, Characters 46, 48, 60 and 102, reference calls cathode and anode); a power source (Column 4, Lines 54 – 56) substantially adjacent said laser source and adapted for causing the laser source to generate a laser beam (see Fig. 4); and a cooling fan positioned substantially adjacent said power source and located in a generally straight line path with said laser source and said power source, said cooling fan adapted for generating an air flow for cooling said laser source and said power source (Figure 4, Column 1, Lines 44 – 67, Column 2, Lines 1 – 3, Column 4, Lines 60 – 67 and Column 5, Lines 1 - 5).

**Regarding claims 8, 9, 16, and 17,** Ostler discloses in Figure 4, cooling fan (see Fig. 4, Character 100) generates the air flow in a direction to cool said laser source (see Fig. 4, Character 42) before cooling said power source (Column 4, Lines 54 – 56) or said cooling fan (see Fig. 4, Character 100) generates the air flow in a direction to cool said power source (Column 4, Lines 54 – 56) before cooling said laser source (see Fig. 4, Character 42) and (Column 1, Lines 44 – 67, Column 2, Lines 1 – 3, Column 4, Lines 60 – 67 and Column 5, Lines 1 - 5).

**Regarding claims 10 and 18,** Ostler discloses in Figure 4, laser source and said power source includes: a substantially developed surface to facilitate a transfer of heat to air on a respective exterior surface; wherein said cooling fan directs the air flow substantially adjacent to the developed surface of each of said laser source and said

Art Unit: 2828

power source (Figure 4, Column 1, Lines 44 – 67, Column 2, Lines 1 – 3, Column 4, Lines 60 – 67 and Column 5, Lines 1 - 5).

**Regarding claim 15**, Ostler discloses in Figure 4 a laser, which comprises: a laser source (see Fig. 4, Character 42) containing: a laser resonator (Column 5, Lines 48 – 49); a laser media see Fig. 4, Character 50, reference call plasma tube); and a means of exciting the laser media (see Fig. 4, Characters 46, 48, 60 and 102, reference call cathode and anode); a power source (Column 4, Lines 54 – 56) for causing the laser source to generate a laser beam (see Fig. 4); and a cooling fan (see Fig. 4, Character 100) adapted for generating an air flow directed in a generally straight line path with said laser source and said power source for cooling said laser source and said power source (Figure 4, Column 1, Lines 44 – 67 and Column 2, Lines 1 – 3).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ostler (5,550,853) in view of Sukhman et al. (5,901,167).

**Regarding claims 4, 12 and 20**, Ostler discloses the claimed invention except for said cooling fins on said laser source are profiled in a direction along the longitudinal axis of the laser. However, it is well know in the art to apply the cooling fins on said laser source are profiled in a direction along the longitudinal axis of the laser as discloses by Sukhman in Column 2, Lines 6 – 7 and Column 4, Lines 11 – 21. Therefore, it would have been obvious to a person having ordinary skill in the art to apply the well know cooling fins on said laser source are profiled in a direction along the longitudinal axis of the laser as suggested by Sukhman to the laser of Ostler, because it will use to cooling a device in a same chamber or housing see Column 4, Lines 11 – 21 of Sukhman.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (571) 272-1940. The examiner can normally be reached on M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Sun Harvey can be reached on (571) -272-1835. The fax phone



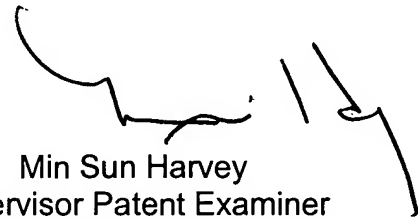
Art Unit: 2828

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Delma R. Flores Ruiz  
Examiner  
Art Unit 2828



Min Sun Harvey  
Supervisor Patent Examiner  
Art Unit 2828

DRFR/MH  
February 8, 2006

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